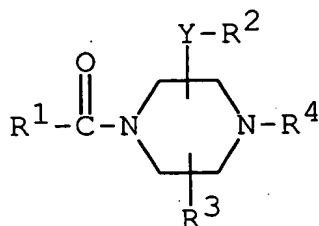


C L A I M S

1. A compound of the formula :



wherein

Y is bond or lower alkylene,

R¹ is aryl which may have substituent(s),

R² is aryl or indolyl, each of which may have substituent(s),

R³ is hydrogen or lower alkyl,

R⁴ is pyridyl(lower)alkylamino(lower)alkynyl;

N-(lower alkyl)-N-[pyridyl(lower)alkyl]amino-(lower)alkyl;

hydroxy(lower)alkoxy(lower)alkyl;

lower alkanoyl(lower)alkoxy(lower)alkyl;

phenyl(lower)alkyl which has hydroxy(lower)alkyl or morpholinyl(lower)alkyl;

ar(lower)alkoxycarbonyl;

(2-pyridyl)(lower)alkyl which may have 1 to 3 substituent(s) selected from the group consisting of lower alkyl, lower alkoxy, lower alkoxycarbonyl, mono(or di or tri)halo(lower)alkyl and halogen;

(3-pyridyl)propyl which may have lower alkoxy or amino;

(3-pyridyl)butyl which may have lower alkoxy or amino;

pyridyl(lower)alkenyl which may have lower alkoxy or amino;

(2-pyridyl)(lower)alkynyl which may have 1 to 3

substituent(s) selected from the group consisting of lower alkyl, lower alkoxy, lower alkoxycarbonyl, mono(or di or tri)halo(lower)alkyl and halogen; (3-pyridyl)(lower)alkynyl which may have lower

5

alkoxy or amino;

pyridyl, thiazolyl, imidazolyl or pyrazolyl, each of which may have substituent(s);

imidazolyl(lower)alkyl which may have 1 or 2

10

substituent(s) selected from the group consisting

of lower alkyl, lower alkynyl, ar(lower)alkyl,

pyridyl(lower)alkyl, mono(or di or

tri)halo(lower)alkyl and halogen;

pyrazolyl(lower)alkyl which may have

15

hydroxy(lower)alkyl, carboxy(lower)alkyl, lower

alkoxycarbonyl(lower)alkyl, morpholinyl(lower)alkyl

or morpholinylcarbonyl(lower)alkyl;

thiazolyl(lower)alkyl which may have lower alkyl;

piperidyl(lower)alkyl which may have

hydroxy(lower)alkyl or lower alkoxy;

20

morpholinyl(lower)alkyl which has 1 or 2

substituent(s) selected from the group consisting

of ethyl, hydroxy(lower)alkyl, halo(lower)alkyl and

lower alkoxy(lower)alkyl;

morpholinyl(lower)alkyl which has lower alkyl and

25

lower alkoxy(lower)alkyl;

(3,5-dimethylmorpholino)(lower)alkyl;

morpholino(lower)alkenyl which may have lower alkyl

or lower alkoxy(lower)alkyl;

(2- or 3-morpholinyl)(lower)alkenyl which may have

30

lower alkoxycarbonyl;

pyrrolidinyl(lower)alkynyl which may have lower alkoxy(lower)alkyl;

morpholinyl(lower)alkynyl which may have 1 or 2

substituent(s) selected from the group consisting

35

of ethyl, propyl, isopropyl, isobutyl,

spirocyclo(lower)alkyl, lower alkoxy(lower)alkyl,
hydroxy(lower)alkyl, carboxy(lower)alkyl,
di(lower alkyl)carbamoyl, lower alkoxycarbonyl and
halo(lower)alkyl;

morpholinyl(lower)alkynyl which has methyl and
lower alkoxy;

(dimethylmorpholino)(lower)alkynyl;

homomorpholinyl(lower)alkynyl which have halogen;

(morpholinylamino)propyl which may have lower
alkanoyl;

thiomorpholinyl(lower)alkynyl which may have
substituent(s);

homomorpholinylamino(lower)alkyl;

thiomorpholinylamino(lower)alkyl; or

saturated heterocyclicimino(lower)alkyl,

saturated heterocyclicaminocarbonyl(lower)alkyl or

saturated heterocyclic(lower)alkoxy(lower)alkyl,

each of which may have substituent(s),

provided that when

R^4 is 2-[N-methyl-N-(3-pyridylmethyl)amino]ethyl,

3-(3-pyridyl)propyl,

3-(3-pyridyl)-2-propynyl,

4-[(2-methoxymethyl)pyrrolidino]-2-butynyl,

4-thiomorpholino-2-butynyl,

3-(morpholinoamino)propyl,

4-morpholino-2-butenyl,

4-morpholino-2-butynyl, or

4-(3,3-dimethylmorpholino)-2-butynyl, then

R^1 is not 3,5-bis(trifluoromethyl)phenyl,

and a salt thereof.

2. The compound of claim 1, in which

Y is lower alkylene,

R^1 is C_6 - C_{10} aryl which may have 1 or 2 substituent(s)

selected from the group consisting of mono(or di

or tri)halo(lower)alkyl, halogen, lower alkylamino, di(lower)alkylamino and nitro,

R^2 is C_6-C_{10} aryl or indolyl, each of which may have 1 to 3 substituent(s) selected from the group consisting of lower alkyl, mono(or di or tri)halo(lower)alkyl, lower alkylenedioxy, hydroxy, hydroxy(lower)alkyl, lower alkoxy, lower alkylamino and di(lower)alkylamino,

R^3 is hydrogen, and

R^4 is pyridyl(lower)alkylamino(lower)alkynyl;

(2-pyridyl)propyl which may have 1 to 3 substituent(s) selected from the group consisting of lower alkyl, lower alkoxy, lower alkoxycarbonyl, mono(or di or tri)halo(lower)alkyl and halogen;

pyridyl, thiazolyl, imidazolyl or pyrazolyl, each of which may have 1 or 2 substituent(s) selected from the group consisting of lower alkyl, ar(lower)alkyl and pyridyl(lower)alkyl;

imidazolyl(lower)alkyl which has 1 or 2 substituent(s) selected from the group consisting of lower alkyl, lower alkynyl, ar(lower)alkyl, pyridyl(lower)alkyl, mono(or di or tri)halo(lower)alkyl and halogen;

(2-methyl-1H-imidazol-4-yl)(lower)alkyl which has 1 or 2 substituent(s) selected from the group consisting of isopropyl, lower alkynyl, ar(lower)alkyl, pyridyl(lower)alkyl, mono(or di or tri)halo(lower)alkyl and halogen;

(5-methyl-1H-imidazol-4-yl)(lower)alkyl which has 1 or 2 substituent(s) selected from the group consisting of isopropyl, lower alkynyl, ar(lower)alkyl, pyridyl(lower)alkyl, mono(or di or tri)halo(lower)alkyl and halogen;

piperidyl(lower)alkyl which may have hydroxy(lower)alkyl or lower alkoxy;

morpholinyl(lower)alkyl which has 1 or 2
 substituent(s) selected from the group consisting
 of ethyl, hydroxy(lower)alkyl, halo(lower)alkyl and
 lower alkoxy(lower)alkyl;

5 morpholinyl(lower)alkyl which has lower alkyl and
 lower alkoxy(lower)alkyl;
 (3,5-dimethylmorpholino)(lower)alkyl;
 morpholino(lower)alkenyl which may have lower alkyl
 or lower alkoxy(lower)alkyl;

10 (2- or 3-morpholinyl)(lower)alkenyl which may have
 lower alkoxycarbonyl;

pyrrolidinyl(lower)alkynyl which may have lower
 alkoxy(lower)alkyl;

15 morpholinyl(lower)alkynyl which may have 1 or 2
 substituent(s) selected from the group consisting
 of ethyl, propyl, isopropyl, isobutyl,
 spirocyclo(lower)alkyl, lower alkoxy(lower)alkyl,
 hydroxy(lower)alkyl, carboxy(lower)alkyl, di(lower
 alkyl)carbamoyl, lower alkoxycarbonyl and
 20 halo(lower)alkyl;

morpholinyl(lower)alkynyl which has methyl and
 lower alkoxy(lower)alkyl;

(dimethylmorpholino)(lower)alkynyl; or
 homomorpholinyl(lower)alkynyl which may have
 25 halogen.

3. The compound of claim 2, in which

Y is lower alkylene,

30 R^1 is phenyl which has 1 or 2 substituent(s) selected
 from the group consisting of trihalo(lower)alkyl,
 halogen, lower alkylamino, di(lower)alkylamino and
 nitro,

R^2 is phenyl or indolyl, each of which have 1 or 2
 substituent(s) selected from the group consisting
 35 of lower alkyl, trihalo(lower)alkyl, lower

alkylenedioxy, hydroxy, hydroxy(lower)alkyl, lower alkoxy, lower alkylamino and di(lower)alkylamino,

R³ is hydrogen, and

R⁴ is (2-pyridyl)propyl which may have 1 to 3

substituent(s) selected from the group consisting of lower alkyl, lower alkoxy, mono(or di or tri)halo(lower)alkyl and halogen;

morpholinyl(lower)alkyl which has 1 or 2

substituent(s) selected from the group consisting of ethyl, hydroxy(lower)alkyl, halo(lower)alkyl and lower alkoxy(lower)alkyl;

morpholinyl(lower)alkynyl which may have 1 or 2

substituent(s) selected from the group consisting of ethyl, propyl, isopropyl, isobutyl,

spirocyclo(lower)alkyl, lower alkoxy(lower)alkyl, hydroxy(lower)alkyl, carboxy(lower)alkyl, di(lower alkyl)carbamoyl, lower alkoxycarbonyl and halo(lower)alkyl.

4. A compound of claim 3, which is selected from the group consisting of

(1) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-4-[4-((3S)-3-ethylmorpholino)-2-butynyl]-2-[(1H-indol-3-yl)methyl]piperazine,

(2) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-(3,4-dimethylbenzyl)-4-[2-((2S)-2-methoxymethyl-morpholino)ethyl]piperazine,

(3) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-(3,4-dimethylbenzyl)-4-[2-((3R)-3-methoxymethyl-morpholino)ethyl]piperazine,

(4) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-(3,4-dimethylbenzyl)-4-[2-((2R)-2-methoxymethyl-morpholino)ethyl]piperazine,

(5) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-2-[(1H-indol-3-yl)methyl]-4-[2-((2S)-2-methoxymethyl-

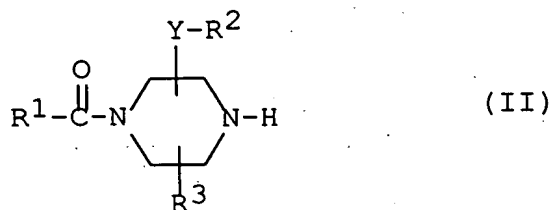
morpholino)ethyl]piperazine, and

(6) (2R)-1-[3,5-Bis(trifluoromethyl)benzoyl]-4-[2-
((3R)-3-ethylmorpholino)ethyl]-2-[(1H-indol-3-yl)-
methyl]piperazine

or a pharmaceutically acceptable salt thereof.

5. A process for the preparation of the compound of claim 1
or a salt thereof, which comprises,

(1) reacting a compound of the formula (II) :



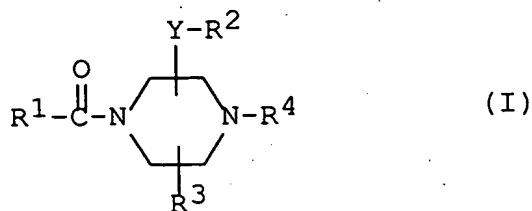
wherein R^1 , R^2 , R^3 and Y are each as defined in claim 1,
or a salt thereof, with a compound of the formula
(III) :



wherein R^4 is as defined in claim 1 and

W_1 is a leaving group,

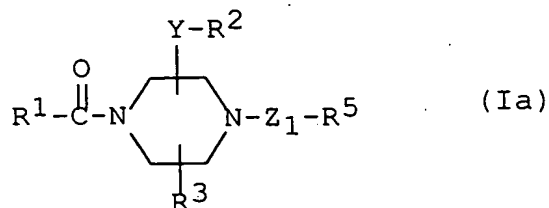
or a salt thereof to give a compound of the formula
(I) :



wherein R^1 , R^2 , R^3 , R^4 and Y are each as defined in

claim 1, or a salt thereof,

(2) subjecting a compound of the formula (Ia) :



wherein R^1 , R^2 , R^3 and Y are each as defined above,

R^5 is 2-pyridyl which may have 1 to 3

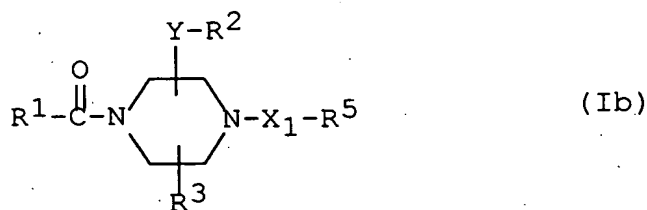
substituent(s) selected from the group consisting of lower alkyl, lower alkoxy,

lower alkoxycarbonyl, mono(or di or tri)halo(lower)alkyl and halogen; or

3-pyridyl which may have lower alkoxy or amino, and

Z_1 is lower alkynylene,

or a salt thereof to a reduction reaction to give a compound of the formula (Ib) :



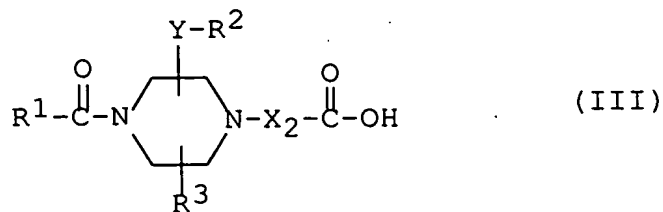
wherein R^1 , R^2 , R^3 , Y and R^5 are each as defined above,

and

X_1 is lower alkylene,

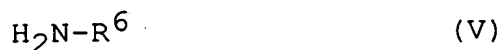
or a salt thereof,

(3) reacting a compound of the formula (III) :

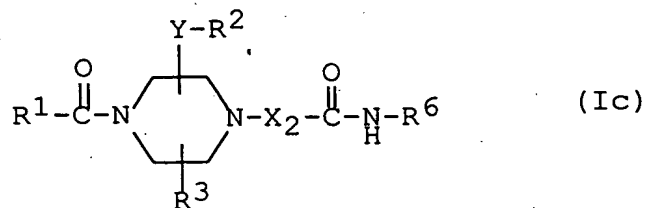


wherein R^1 , R^2 , R^3 and Y are each as defined above,
and

X_2 is lower alkylene,
or its reactive derivative at the carboxy group or a
salt thereof with a compound of the formula (V) :

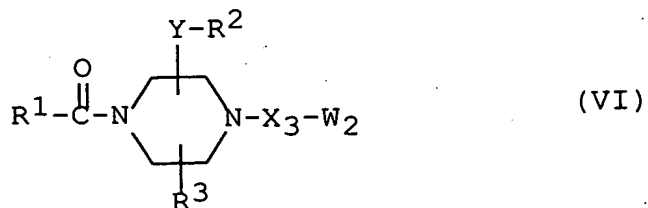


wherein R^6 is saturated heterocyclic which may have
substituent(s),
or a salt thereof to give a compound (Ic) :



wherein R^1 , R^2 , R^3 , R^6 , X_2 and Y are each as defined
above,

(4) reacting a compound of the formula (VI) :



wherein R^1 , R^2 , R^3 and Y are each as defined above,

X_3 is lower alkylene and

W_2 is a leaving group,

or a salt thereof with a compound of the formula

5 (VII) :



wherein R^7 is pyridyl(lower)alkylamino;

N-(lower alkyl)-N-[pyridyl(lower)alkyl]-
amino;

10 1-imidazolyl which may have 1 or 2
substituent(s) selected from the group
consisting of lower alkyl, lower alkynyl,
ar(lower)alkyl, pyridyl(lower)alkyl,
mono(or di or tri)halo(lower)alkyl and
15 halogen;

1-pyrazolyl which may have
hydroxy(lower)alkyl, carboxy(lower)alkyl,
lower alkoxy carbonyl(lower)alkyl,
morpholinyl(lower)alkyl or
20 morpholinyl carbonyl(lower)alkyl;

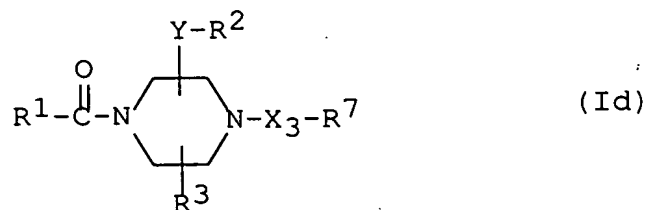
piperidino which may have
hydroxy(lower)alkyl or lower alkoxy;
morpholino which has 1 or 2
substituent(s) selected from the group
25 consisting of ethyl, hydroxy(lower)alkyl,
halo(lower)alkyl and lower alkoxy-
(lower)alkyl;

morpholino which has lower alkyl and
lower alkoxy(lower)alkyl;
30 3,5-dimethylmorpholino;
morpholinylamino which may have lower
alkanoyl;

homomorpholinylamino; or
thiomorpholinylamino,

35 or a salt thereof to give a compound of the formula

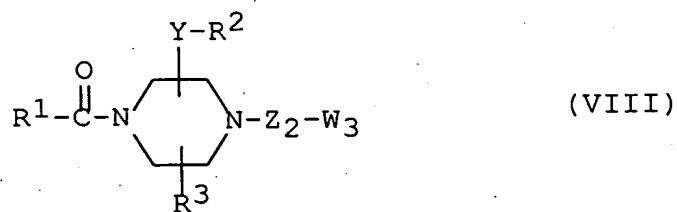
(Id) :



wherein R^1 , R^2 , R^3 , R^7 , X_3 and Y are each as defined above,

or a salt thereof,

(5) reacting a compound of the formula (VIII) :



wherein R^1 , R^2 , R^3 and Y are each as defined above,
 Z_2 is lower alkenylene, and

W_3 is a leaving group,

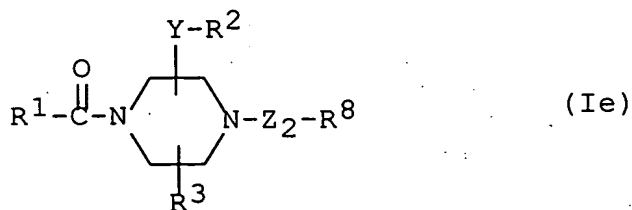
or a salt thereof with a compound of the formula (IX) :



wherein R^8 is morpholino which may have lower alkyl or lower alkoxy(lower)alkyl,

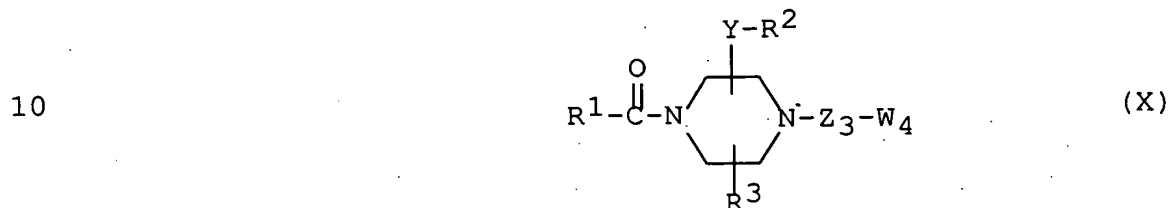
or a salt thereof to give a compound of the formula

(Ie) :



wherein R^1 , R^2 , R^3 , R^8 , Y and Z_2 are as defined as
above,
or a salt thereof,

5 (6) reacting compound of the formula (X) :

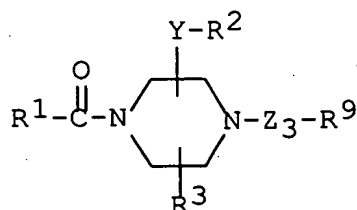


15 wherein R^1 , R^2 , R^3 and Y are each as defined above,
 Z_3 is a lower alkynylene and
 W_4 is a leaving group,
or a salt thereof with a compound of the formula (XI) :



wherein R^9 is pyrrolidino which may have lower
alkoxy(lower)alkyl;
morpholino which may have 1 or 2
substituent(s) selected from the group
25 consisting of ethyl, propyl, isopropyl,
isobutyl, spirocyclo(lower)alkyl, lower
alkoxy(lower)alkyl, hydroxy(lower)alkyl,
carboxy(lower)alkyl, di(lower
alkyl)carbamoyl, lower alkoxy carbonyl and
30 halo(lower)alkyl;
morpholino which has methyl and lower
alkoxy;
dimethylmorpholino; or
homomorpholino which has halogen,
35 or a salt thereof to give a compound of the formula

(If) :



(If)

wherein R^1 , R^2 , R^3 , R^9 , Y and Z_3 are each as defined
above,
or a salt thereof.

6. A pharmaceutical composition which comprises, as an active ingredient, a compound of claim 1 or a pharmaceutically acceptable salt thereof in admixture with pharmaceutically acceptable carriers.
7. A compound of claim 1 for use as a medicament.
8. A method for treating or preventing Tachykinin-mediated diseases which comprises administering an effective amount of a compound of claim 1 or a pharmaceutically acceptable salt thereof to human being or animals.
9. A compound of claim 1 for use as Tachykinin antagonist.
10. Use of a compound of claim 1 for manufacture of a medicament for treating or preventing Tachykinin-mediated diseases.